

AUTHOR:

Krystanov, L. (Sofia, Bulgaria)

50-12-3/19

TITLE:

On the Activity of Incompletely Wetted Nuclei of Condensation
(Ob aktivnosti ne vpolne smachivayemykh kondensatsionnykh yader)

PERIODICAL:

Meteorologiya i Gidrologiya, 1957, Nr 12, pp. 16-21 (USSR)

ABSTRACT:

The criterium of activity of these nuclei is the work of formation of the germ (nucleus) of drops in the atmosphere at the cooperation of the condensation nucleus. This work can be carried out on the thermodynamical way. Assuming that the nucleus of condensation is a solid particle not dissolved in water, and completely being wetted by the water (and in the advantageous case represents a salt particle or its salt solution), this nucleus is able to tie the water molecules to its surface, before the supersaturation of vapor takes place. This formation may be considered as a pre-state of the liquid phase. The behavior of this thin water layer on a completely wetted foreign corpuscle will be of importance for the course of coming condensation process. The formation of the thin water layers belongs to the so-called "time of preparation" of the nuclei of condensation in the atmosphere, and is closely connected with the formation of the solid phase of the water in the atmosphere (ice formation). Therefore, the investigation of the state and of the peculiarities of thin water layers basing on different

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On the Activity o Incompletely Wetted Nuclei of Condensation.

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surfaces is of practical importance. Detailed computations concerning the formation of the "germ drops" around foreign bodies, will follow. There are 2 figures, and 5 references, 2 of which are Slavic.

AVAILABLE: Library of Congress

1. Condensation
2. Thermodynamics-Applications

Card 2/2

MILOSHEV, G.; KRYSTANOV, L. [Krustanov, L.]

On the possibilities of changing the activity of condensation nuclei. Doklady BAN no.7:667-670 '61.

(Condensation) (Atmospheric nucleation)

13117
S/169/62/000/011/023/077
D228/D307

2/3/00
AUTHORS:

TITLE:
PERIODICAL:

TEXT:

angle φ_a , the nucleus on a spherical substrate of radius r_k having a diminished radius r_{ka} is equal to the sum of the work of adsorption of the nucleus in the absence of the liquid layer and the work of formation of the droplet on a nucleus having a diminished radius r_{ka} in comparison with the radius r_k of a nucleus on a spherical substrate of radius r_k . The work of formation of the droplet on a nucleus having a diminished radius r_{ka} is equal to the sum of the work of adsorption of the nucleus on a spherical substrate of radius r_k in comparison with the radius r_k of a nucleus on a spherical substrate of radius r_k .

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Formation of droplets ...

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$$\begin{aligned} A_{ka}^* &= \frac{4}{3}\pi r_k^2 \sigma \left(1 - \frac{\Delta\sigma}{\sigma}\right)^3 - \\ &- \frac{4}{3}\pi r_0^2 \sigma \left[3 \left(\cos \varphi - \frac{\Delta\sigma}{\sigma}\right) - 2 \frac{r_0}{r_k} \right], \end{aligned}$$

Here $\Delta\sigma$ is the change in the surface energy of liquid on adsorption. The following can be established by comparing the correlation obtained with that for the work of formation of a droplet on an incompletely wetted spherical nucleus:

$$A_k^* = \frac{4}{3}\pi r_k^2 \sigma - \frac{4}{3}\pi r_0^2 \sigma \left(3 \cos \varphi - 2 \frac{r_0}{r_k}\right).$$

- 1) When adsorption occurs only on the precipitating liquid at wetting angles of $0^\circ \leq \varphi \leq 180^\circ$, the work of formation of a droplet during adsorption is lower than is the case without it.
- 2) At all wetting angles adsorption solely on the substrate impedes droplet formation.
- 3) The most favorable conditions for nucleus (droplet)

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Formation of droplets ...

formation arise if adsorption takes place on the precipitating liquid and desorption occurs from the surface of condensation nuclei.

[Abstracter's note: Complete translation]

Card 3/3

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S/169/62/000/009/095/120
D228/D307

26.1420

AUTHORS: Miloshev, G. and Krystanov, L.

TITLE: Possibilities of altering the activity of condensation nuclei

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 74, abstract 9B451 (Dokl. Bolg. AN, 14, no. 7, 1961, 667-670 (summary in Eng.))

TEXT: The work of forming an embryo-drop (A_k^*) of radius r_k on a not quite moist condensation nucleus of radius r_o is always less than that necessary for forming an equally large nucleus in homogeneous water vapors (A_k^0) and depends on the wetting angle φ : \checkmark

$$\frac{A_k^*}{A_k^0} = 1 - 3 \left(\frac{r_o}{r_k} \right)^2 \cos \varphi + 2 \left(\frac{r_o}{r_k} \right)^3 \quad (1)$$

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Possibilities of altering ...

At values $0 < \varphi < 48^\circ$ the work necessary for forming an embryo-drop on a not quite moist nucleus (A_k^*), is less than A_k^0 for all values of the ratio r_o/r_k that satisfy the condition $0 < r_o/r_k < 1$. If the wetting angles are less than the limiting value $\varphi = 48^\circ$, the almost moist nuclei act as embryos whenever $r_o < r_k$. Since function (1) in the interval of values $0 < \varphi < 90^\circ$ has a minimum when $r_o/r_k = \cos \varphi$, it is possible to ascertain the size of a given substance's nuclei that act most effectively at a known value of φ and at any supersaturation. When extraneous matter is adsorbed on the lining and on the surface of the liquid film, the specific surface energy of the lining ($\Delta\sigma_o$) and liquid ($\Delta\sigma$) changes accordingly. This leads to a change in the work of nucleus formation, which is taken into account by the following relationship:

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$$\left(\frac{A_{ka}^*}{A_k^0} \right)_{\min} = \left(1 - \frac{\Delta\sigma}{\sigma} \right)^3 - \left(\cos \varphi - \frac{\Delta\sigma_0}{\sigma} \right)^3 \quad (2)$$

The analysis of relationship (2) carried out in the paper indicates that, in the case of adsorption of extraneous matter only on the lining, the work of embryo formation increases as compared with that when there is no adsorption. The activity of condensation nuclei, on the contrary, grows when their surface is desorbed; and the limiting angle of wetting, the nucleus' size, and the critical value of the quantity r_0/r_k increase. The work of embryo formation diminishes, too, if extraneous matter is adsorbed on the surface of the liquid film. In this case the limiting angle of wetting and the sizes of the most effectively acting nuclei remain as they were in the absence of adsorption. The maximum de-

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crease in the work of embryo formation occurs during adsorption on the liquid film's surface and during simultaneous desorption from the condensation nuclei's surface. At values $\Delta\sigma/\sigma - \Delta\sigma_0/\sigma > 1$ - $-\cos\varphi$ drops can form directly on condensation nuclei in a known interval of the values of r_o/r_k , without any expenditure of energy in the formation of liquid phase embryos. *(Abstracter's note: Complete translation.)*

Card 4/4

- 181
- SOCIE, "POLYMER POLARIZABILITY ANALYSIS", Vol. 15, no 1, 1980.
1. "Concerning a Cognitition Problem," A. STURZ; article in German; pp 3-8.
 2. "Concerning a Class of Functions in Analytical Mechanics in Terms of the Equations of Motion," D. V. KAMENOV and S. TITOV; or the Polytechnical Institute of Leningrad, Russia; article in Russian; pp 9-11.
 3. "A New Proof of the Dirichlet-Mazilin Principle," V. V. VASIL'EV; article in French; pp 13-16.
 4. "Extended Symmetry under Powerful active Electromagnetic Interaction," R. ZYKIN; article in Russian; pp 17-22.
 5. "Profile of the Wind in the Layer of Air Close to the Earth Under Conditions of Intense Turbulence," D. V. KAMENOV and L. N. KOSTROV; article in Russian; pp 23-27.
 6. "A Criterion for Asymmetries and Isolating Adiabatic Invariants of the Topospace," A. V. GORYAINOV; article in Russian during a double jointed session with S. V. KIRPICHNIKOV and J. GUTENBERG; article in German; pp 28-31.
 7. "Concerning the Solution of a System of Equations of Hydrodynamics in the Layer of the Atmosphere," V. V. VASIL'EV; article in German; pp 32-37.
 8. "Quasiperiodic Motion in Nonlinear Mechanics," V. V. VASIL'EV; article in German; pp 38-42.
 9. "The Discovery of Several Active Assets During an Overall Design of Artificial Organ of Human," V. V. VASIL'EV; article in German; pp 43-47.
 10. "Concerning the Party of the Conqueror in the Global General Space of the Planets," A. V. GORYAINOV; Institute for Optical Electronics of the USSR Academy of Sciences; article in German; pp 48-52.

— 1/3 —

L 16738-63

EWT(1)/BDS AFFTC/ASD/ESD-3 RB

S/124/63/000/004/026/064

AUTHOR: Yordanov, D.; Krystanov, L.

56

TITLE: Wind profile in the near-ground layer of the atmosphere, in the presence of unstable equilibriumPERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1963, 109, abstract 4B722
(Dokl. Bolg. AN, v. 15, no. 1, 1962, 21-24)

TEXT: This article presents a generalization of Prandtl's theory for the case of unstable stratification of the near-ground layer of air. Substituting $w' = w'_M + w'_T$, $\ell = \ell_M + \ell_T$, where w'_M and w'_T are the components of the mechanical and thermal pulsations of the vertical velocity, respectively, while ℓ_M and ℓ_T are the instantaneous displacement paths resulting from the mechanical and thermal pulsations; and assuming these quantities to be independent of each other, the authors arrive at

$$\frac{d\bar{u}}{dz} = \frac{v_*}{kz} \frac{k_M}{k_M + k_T}$$

Here, \bar{u} is the average velocity at height z , v_* is the dynamic velocity, k is
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Wind profile in

Karman's constant, k_M is the mechanical turbulence factor, k_T is the thermal turbulence factor.

$$\phi = \frac{k_M}{k_M + k_T}$$

is the correction to the logarithmic wind law for instability, the so-called universal function. In addition, a form of the universal function depending upon Richardson's number is found:

$$\frac{2}{1 + [1 + 2^{1/2} \lambda^2 (-Ri)^{1/2}]^{1/2}}$$

where λ is an empirical parameter.

Whatever the equilibrium ($Ri < 0$) the wind profile in the near-ground level is logarithmic. With instability ($Ri < 0$) ϕ falls off and the gradient of the average wind becomes less.

In conclusion the authors compare the results of the computations of the vertical wind profile in the near-ground layer with data from other authors. There is a bibliography of 12 items. E. A. Burman.

[Abstracter's note: Complete translation.]

Card 2/2

MILOSHEV, G.; KRYSTANOV, L. [Krustanov, L.], akd.

The most active dimensions of condensation nuclei during adsorption. Doklady BAN 15 no.5:471-474 '62.

1. Chlen Redaktsionnoy kollegii i otvetstvennyy redaktor,
"Doklady Bolgarskoy Akademii nauk" (for Krustanov).

KRYSTANOV, L. [Krustanov, L.] (Sofiya, Bolgariya); MILOSHEV, G.
(Sofiya, Bolgariya)

Mechanism of condensation processes in the atmosphere.
Meteor. i gidrol. no.12:8-13 D '63. (MIRA 17:3)

ACC NR: A-6027385

SOURCE CODE: RU/0033/65/069/006/0321/0326

AUTHOR: Krystanov, L. (Doctor; President BAN; Director); Milochov, G.; Lovkov, L.

ORG: Instituto for Geophysics, BAN, Sofia

TITLE: Effectiveness of the surfaces of the ice forms in the state of equilibrium
[This paper was presented at the Symposium on Cloud Physics, held in Budapest from
8 to 10 September 1965.]

SOURCE: Idojaras, v. 69, no. 6, 1965, 321-326

TOPIC TAGS: ico, crystal growth, cloud physics

ABSTRACT: The formation of two-dimensional nuclei appearing on the surfaces of ice crystals was investigated by studying the equations characterizing the forces involved in the growth. After determining the force needed for the separation of the "half crystal" from the hexagon or prism surfaces, the force required for nucleus formation as a function of supersaturation was calculated. The prism surfaces required less force than the hexagon surfaces. The factors discussed are of importance in cloud physics. [Orig. art. has: 2 figures and 16 formulas. Based on authors' Eng. abstr. / JPRST 34,270]

SUB CODE: 04, 20 / SUBM DATE: none / SOV REF: 003 / OTH REF: 001

one
Card 1/1

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KRYSTEK, Ivan

✓ Alkalifrich eruptive rocks in southerner Moravia.
Ivan Krytek (Masaryk Univ., Brno, Czech), Geol.
Tract No. 81, 101-96 (1935) (German summary).—Petro-
graphic descriptions and decls. of SiO_2 , K_2O , and Na_2O are
given for 10 andesites and basalts. Michael Flinchier

KRYSTEK, I.

CZECHOSLOVAKIA / Cosmochemistry. Geochemistry. Hydrochemistry

Abs Jour : Rof Zhur - Khiriya, No 3, 1957, No 7834 D

Author : Krystek, I.

Inst : Not given

Title : Basic Igneous Rocks of Southwestern Moravia

Orig Pub : Geol. Prace. SAV, 1955, No 41, 103-130

Abstract : A geologic and petrographic description of tertiary sill and dike intrusions: olivine-pyroxenic phonobasaltic dolerites, olivine-pyroxenic phonobasalts, pyroxeno-amphibolic phonoandesites, amphibolic phono-andesites, and biotitic phonoandesites. By their chemical composition the andesites are related to the trachyandesites and the basalts to the basic basalts. The presence of alkalis is due to the basic character of the non-crystalline country rock, the alkali having been introduced into the magma during the intrusion process. The author admits the possibility of the

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CZECHOSLOVAKIA / Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour : Rof Zhur - Khiriya, No 3, 1957, No 7834

absorption of Na from the connate waters which, at the present, contain up to 4,955.0 mg/liter. Small deposits of pyrrhotite, pyrite, chalcopyrite, molybdenite, sphalerite, galenite, and siderite have been found recently to be associated with the above named rocks.

Card : 2/2

KRYSTEK, I.

"Xenolite from the alkali inclusions in Southeastern Moravia."
VESTNIK, ustredni ustav geologicky, Prague, Czechoslovakia, Vol. 33, No. 4, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959
Uncl.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1

KRYSTEK, I.

Authigenous Fe rocks and their importance for sedimentology.
Prace ust naft 18:29-30 '61.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

KRYSTEK, Ivan, RNDr., kandidat geologicko-mineralogickych věd.

New type of separation cuvettes for separating heavy minerals
in a laboratory separator. Geol pruzkum 6 no.2:59 P'64

1. Ceskoslovenske naftove doly, n.p., Hodonin, Vyzkumný ustav
Brno.

KRYSTEK, Ivan

Results of the sediment-petrography research in the Danube
Valley. Prace Ust naft 21 nos. 93/98:127-181 '64.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1

KRYSTEK, Ivan

Sedimentary-petrographical processing of cores of the Nova
Vioska-1 key borehole. Prace Ust naft 22 no. 99:56-80 '64.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

1. 1. 1. 1.

Krystek, J.

Fundamentowanie w budownictwie. (Dla rolnikow wykwalifikowanych, mistrzow i technikow budowlanych. W-w. 1.) Warszawa. Budownictwo i architektura (1955) 150 p. (Foundations in building for skilled workers, masters, and building technicians. 1st ed. illus. bibl. diagrs.)

SO: Monthly list of East European Accessions List (EEL) LC, Vol 4, No. 11
November 1955, Uncl.

KRYSTER, Jan, mgr inz.; ZABIELSKI, Jerzy, mgr inz.

Heating, water supply, and sewerage equipment in bus and street car terminal stations. Gaz woda techn sanit 37 no.10;330-332 O '63.

1. Stolica Design Office of Communal Constructions, Warsaw.

KRYSTETS

Rumania / Microbiology - Microbes Pathogenic to Humans F-4
and Animals

Abs Jour: Referat. Zh. Biol., No. 1, 1958, 707

Author : Popovich, Tsaga, Krystets

Title : Utilization of Solid Medium for Cultural Control
of Capromyces Agalactiae Intended for Vaccination

Orig Pub: Probl. imunol. veterin., 1955, 3, 37-41, 43, 45,
47-48

Abstract: No abstract.

Card 1/1

KRYSTEV, B.; YANCHEV, V.; DUDUNKOV, Z.; NACHEV, K.

Malignant degeneration of a villous tumor of the rectum with
severe disorders of protein and water-salt metabolism. Khi-
rurgia no.3:123-125 '63.
(MIRA 16:5)

1. Is Nauchno-issledovatel'skogo onkologicheskogo instituta
(direktor-dotsent N. Anchev), Sofiya.
(RECTUM--CANCER) (PROTEIN METABOLISM)
(WATER METABOLISM)

KARDZHIYEV, B., SIVCHEV, S., KRYSTEV, D., PELOVA, N., BAYEV, B., DOBREV, TS.

Clinical and anatomical characteristics of lung cancer. Arkh.pat.
18 no.3:58-61 '56 (MIRA 11:10)

1. Iz kafedry obshchey patologii i patologicheskoy anatomi
(zav. - prof. B. Kardzhiev) i kafedry gosпитal'noy khirurgii
(zav. prof. St. Dimitrov) Vysshego meditsinskogo instituta imeni
Vulko Chervenkova.

(LUNGS, neoplasms
anat. aspects & statist. (Rus))

KRYSTEV, G.

- (b) (7)
- | | |
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| 12. <u>On the situation between the Greek Left and the "National Committee of Total Resistance". A. G. Papan in Periodical "Greek Democracy", pp 313-316.</u> | 13. <u>Moscow and Economic Rehabilitation of Greece and Russia and the Performance of the USSR Treasury in English with certain remarks, pp 52-56.</u> |
| 14. <u>Report of Soviet-Greek Joint Committee in favour of Greece. E. S. Chagin (In Russian with some remarks), pp 261-268.</u> | 15. <u>Geographical Survey of Western Asia Minor and N.W. in Central Asia. A. V. Gusev (In English, with certain remarks), pp 269-274.</u> |
| 16. <u>New Books Received from Bulgaria. N. Kostova (In English with certain remarks), pp 275-276.</u> | 17. <u>Address on the Situation in Central Europe and the Balkans. A. A. Abrikosov (In English with certain remarks), pp 277-282.</u> |
| 18. <u>President Tito's Visit to the Soviet Union. A. A. Shchegoleva (In English with certain remarks), pp 283-287.</u> | 19. <u>Partial Report of International Analysis of Soviet Affairs and Economics. R. N. Karpov (In English with certain remarks), pp 288-292.</u> |
| 20. <u>On the Structure of the New Democratic Party of Bulgaria. G. Todorov (In English with certain remarks), pp 293-297.</u> | 21. <u>On the Situation of Soviet Trade with the USA. G. D. Orlitsky (In English with certain remarks), pp 298-302.</u> |
| 22. <u>Comments on the Political and Economic Conditions of the Socialist Countries in Europe and Asia. N. G. Kostova (In English with certain remarks), pp 303-306.</u> | 23. <u>On the Structure of Certain Soviet Institutions in the Sphere of the Economy. N. V. Kostova (In English with certain remarks), pp 307-311.</u> |

— 25 —

KRYSTEV, Kh.

On the structure of the respiratory bronchioles in hens. Dokl. boJg.
akad. nauk 15 no.4:435-437 '62.

1. Predstavleno akad. A. Khadzhilovym.
(BRONCHII) (POULTRY)

VERBEV, P.Yo.; PODVARZACHEVA, A.; YEFREMOVA, A.; GYBEV, Ye.; IVANOV, N.;
SELEKTAR, A.; KILIMOVA, Ye.; STAYKOVA, A.; KHystev, T.

Studies on epidemiological and clinical aspects of epidemic hepatitis
in Bulgaria. Zhur.mikrobiol.epid.i immun. 31 no.9:96-101 S '60.
(MIRA 13:11)

(BULGARIA—HEPATITIS, INFECTIOUS)

KRYSTEV, V.; ANDREYEV, V.; KIROV, S.

Data on the treatment of cancer of the lower lip in the People's
Republic of Bulgaria. Vop. onk. 8 no.1:93-98 '62.
(MIRA 15:2)

1. Iz nauchno-issledovatel'skogo onkologicheskogo instituta (dir. -
prof. V. Mikhaylov), Sofiya, Narodnaya Respublika Bolgarii.
Adres avtorov: Narodnaya Respublika Bolgariya, Sofiya, Nauchno-
issledovatel'skiy onkologicheskiy institut.

(BULGARIA--LIPS--CANCER)

COUNTRY : Bulgaria E-2
CATEGORY :

ABS. JOUR. : RZKhim., No. 1959, No. 8(125)

AUTHOR : Lipchinskiy, Al.; Krysteva, M.
INST. : Chemical-Technological Institute
TITLE : Detection of Molybdenum in Ore Analysis by the Flavitskiy-Isakov Method.

ORIG. PUB. : Godishnik Khim.-tekhnol. in-t, 1957 (1958),
4, No 1, 13-18

ABSTRACT : A study of the thiosulfate-, sulfuric acid-, and thiocyanate-reaction for Mo detection in ore analysis by Flavitskiy-Isakov method. It was found that the most suitable and most sensitive reaction for detection of Mo in polymetallic ores is the reaction with $\text{NH}_4\text{CNS}(\text{KCNS}) + \text{SnCl}_2$; the sensitivity of this reaction is of 10^{-8} (the sensitivity of the reaction with H_2SO_4 is of 10^{-6}).
Authors' summary.

CARD:

99

IVANOV, Ch.P.; ALEKSIYEV, B.V.; KRYSTEVA, M.A.; YORDANOV, B.I.

Infrared spectrometric determination of methionine. Izv.
AN SSSR. Otd.khim.nauk no.7:1356 J1 '61. (MIRA 14:7)

1. Sofiyskiy khimiko-tehnologicheskiy institut i Institut
organicheskoy khimii Bolgarskoy Akademii nauk.
(Methionine)

Country	: BULGARIA
Category	: Farm Animal.
Abs. Jour	: "Zemledeliye", No 16, 1958, 73980
Author	: Krysteva, Yelena
Institut.	: -
Title	: Sugar Content and Sugar Minimum in Silaged Fodder.
Orig. Pub.	: Kooperat. zemledeliye, 1957, No 6, 20
Abstract	: A scheme is presented which gives the best combination of fodder for siloing with the required sugar content in the ensiled mass.
Card:	1/1

ANCZEW .[Anchez,N.]; KRYSZEK,V. [Krystek,V.]; KIROV, S. [Kirov, S.]

Excision of peristernal lymph nodes and some principles in the
surgical management of breast cancer. Nowotwory 14 no.4 s.11-33
O-D 364

I. Z. Naukowa-Biurowcze Instytutu Onkologii, Sofia, Bulgaria.
(Dyrektora prof. dr. N. Anchez [N. Anchez]).

KRYSTIK, F.

Leiner-Moussous erythroderma desquamativa and biotin. Lek. listy, Brno
6 no.22:689-690 15 Nov 51. (CIML 21:4)

1. Of the Pediatric Clinic (Head--Prof. O. Teymchl, M.D.) of Masaryk
University, Brno.

KRYSTIK, F.

Contribution to the diagnosis of suppurative diseases of the
umbilical stump. Cesk.pediat. 15 no.1:46-49 Ja '60.

1. Detaké oddelení nemocnice ve Znojmě, prednosta dr. F. Krystik.
(UMBILICUS dis.)

KRYSTIK, F.

Mucoviscidosis - role of sweat examination. Česk.pediat. 15 no.8:
741-473 Ag '60.

1. Detské oddelenie OUNZ v Znojmě prednosta MUDr. F.Kryštik
(PANCREATIC CYSTIC FIBROSIS diag.)
(SWEAT chem)

KRYSTIK, F.

Occult fractures of the fibula in children. Cesk. pediat. 16 no.6:
509-513 Je '61.

1. Detske oddeleni nemocnice ve Znojme, predmosta MUDr. Ferd.
Krystik.

(FIBULA fract. & disloc.)

KRYSTIK, F.

SURNAME, Given Name

Country: Czechoslovakia

Academic Degrees: MD

Affiliation: Pediatric Department OUNZ /Okresni ustav narodniho zdravi;
Okres Institute of Public Health/ (Detske oddeleni OUNZ),

Znojmo; Director: F. KRYSTIK, MD.

Source: prague, Prakticky Lekar, Vol 41, No 8, 1961, pp 353-357.

Data: "Mucoviscidosis and Lung."

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670 981643

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ZELNICEK, Eman; MRSKOS, Antonin; KRYSTIK, Ferdinand

Contribution to the metabolism of alpha-keto-acids in glyco-
genesis with glucose-6-phosphatase insufficiency. Scr.med.
fac.med. Brunensis 37 no.1:11-19 '64.

1. Katedra lekarske chemie lek. fak. university J.E.Purkyne
v Brne (vedouci: prof. MUDr. O.Wagner) a Detske oddeleni ne-
mocnice ve Znojme (primari: MUDr. F.Krystik).

*

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1

KRYSTINOV, G.D.

Modern treatment of chronic pleural empyema. Khirurgiia 36
no.1220-27 Ja '60. (MIRA 13:10)
(EMPYEMA)

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

KRYSTMAN, V., kand.med.nauk

These drugs you should have in your medicine ch st. Rab.i sial.
38 no.5:21 My '62. (MIRA 16:1)
(Home nursing)

KRYSTOF, A.

"On the Highways of Our Country", P. 12, (TECHNICKE NOVINY, Vol. 2, No. 9,
May 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

KRYSTICF, A

The Skoda 706 motor trucks and buses.

p. 52 (Automobil) Vol. 1, no. 2, Feb. 1957 Praha, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, Jan. 1958

ZRYSTOF, A.

The new Skoda 706, MTS, and RTO cars. p. 560. (Svet Motoru, Vol. 11,
No. 13, Aug 1957, Praha, "Czechoslovakia")

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Unc1.

CERNY, M.; DIFEK, M.; KRYSTOF, M.

Studies on the reactivity of the CNS in radiotelegraph operators.
Activ. nerv. sup. 4 no.2:186 '62.

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vseobecneho lekarstvi Karlovy univerzity v v Praze, Ustredni
zdravotnický ustav ministerstva vnitra v Praze.

(CENTRAL NERVOUS SYSTEM physiol)
(OCCUPATIONS AND PROFESSIONS)

KRYSTOF, V.; HOMOLKA, B.

How to solve temporary storage of grain, p. 51.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho prumyslu a vykupu zemedelskych výrobku a Sdruzeni mlynu a pekaren)
Praha, Czechoslovakia, Vol. 5, no. 2, Feb. 1959.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2,
Feb. 1960

Uncl.

KRYSTOFORA, O.
CH

25

The effect of pH on dyeing by Kriochrome Black T. Jih
Málo and Olga Krystoforová (Tech. Univ., Prague, Czech).
Chem., OSN 22, 136-42 (1950). — Expts. on normal dyeing
procedures, with Kriochrome Black T (Geigy Co.) at 3%
absorption and 2% chroming ($K_2Cr_2O_7$), at 9 different pH
levels (from 1.0H to 7.7S), were carried out and com-
pared with com. dyeing procedures for chromium blacks on
wool. The absorption from the bath decreases with in-
creasing pH in both acid dyeing and chroming process,
and it was proved that the blue shade is increased. pH
of 2.9 to 3.0 in the bath at the beginning is changed to pH
of 4.7 to 4.8 at the end of acid dyeing. The acidification of
the bath requires slightly less acid which corresponds to the
free amino groups in the wool. The strength of the acid
dyeing is very little influenced by chroming. The blue-
black shade is formed if the quantity of the bound Cr(III)
corresponds to the ratio 3 g. atoms Cr to 2 moles of the dye,
or is smaller. In chroming, the absorption from the bath
was detd. iodimetrically and photocolorimetrically. After
chroming, the bath was optically weaker than in any of the
other expts. and pH increased to 9.2. After chroming
the hanks, the stability in washing at 100° was good. The
properties of Kriochrome Black T, the acid dyeing of wool
from the eve. point of view, and the chemistry of chroming
are discussed.

Jan Michx

1951

KRYSTOFOVIC, Leo

Acceleration of the cooling of large castings in molds.
Slevarenstvi 12 no. 3r 95-98 Mr '64.

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(LIVER, diseases

diag., protein fractions in blood, determ., micro-electrophoresis)

(BLOOD PROTEINS, in various diseases

liver. dis., diag., deter., micro-electrophoresis)

(ELECTROPHORESIS

micro-electrophoresis of blood protein fractions in
diag. of liver dis.)

KRAWCZYNSKI, Jerzy; KRYSTOSIK, Jerzy

Diagnostic significance of uropepsin. Polski tygod. lek.
10 no.32:1058-1063 8 Aug 55.

1. Z Centralnego Laboratorium Klinicznego P.S.K. Lublin;
kierownik: dr. Med. Jerzy Krawczynski i z Kliniki Polonictwa
i Chorob Kobiecych A.M. w Lublinie; kierownik: prof. dr.
Stanislaw Liebkart, Lublin, ul. Staszica 16.

(UROPEPSIN
diag. value, review)

Krystosik J.

EXCERPTA MEDICA Sec 10 Vol 12/3 Obstetrics Mar '60

457. THERAPEUTIC VALUE OF GLUTAMIC ACID IN TOXAEMIAS OF PRE-GNANCY - Wartość lecznicza kwasu glutaminowego w stanach zatróć ciążowych - Krystosik J. - ANN. UNIV. M. CURIE-SKŁODOWSKA, D. 1959,

13/1959 No. Sect. D (223-230) Graphs 7

An understanding of the physiological properties of glutamic acid (GA) and of the part which it plays in nitrogen metabolism in human organism, allows its use therapeutically in a great number of diseases. The author applied GA in the treatment of pre-eclamptic and eclamptic states in 60 women. The preparation was administered orally in daily doses of 6 to 20 g., i.v. in the form of a 10% solution of Ca or Mg salt of GA in doses of 4 to 6 g. daily, or in the form of anal drop infusion (10 to 15 g. of GA in 500 to 1,000 ml. of water). GA showed most effective action when given i.v.; after oral or anal administration its action was slower. No side effects were seen. The daily amount of urine increased after the first day of treatment twice of 3 times as much as the daily quantity before treatment. Oedema disappeared completely after one week of treatment. Oral or anal administration has no influence on the increased blood pressure. I.v. administration of Mg salt of GA decreases the blood pressure. This action was not seen after administration of Ca salt of GA. No convulsions occurred in any of the 49 patients who could be treated in the pre-eclamptic state. Of the 11 patients who were admitted in the eclamptic state, 4 died. Ca salt of GA can provoke uterine contractions.

~~KRYSTOSIK, Jerzy~~ (Lublin, ul. Imbartowska Nr 81.)

Case of allergy to folic acid. Polski tygod. lek. 13 no.32:1246-1248
11 Aug 58.

1. (Z I Kliniki Poloznictwa i Chorob Kobiecych Akademii Medycznej w
Lublinie; kierownik: prof. dr Stanislaw Liebhart).
(FOLIC ACID, inj. eff.
allergic reaction (Pol))
(ALLERGY
to folic acid (Pol))

DOBRZANSKA, Alina; KOWALSKA, Halina; KRYSZTOSIK, Jerzy; PACZOS, Elzbieta

Two cases of developmental anomalies in children. Polski tygod. lek. 13
no. 40:1549-1554 6 Oct 58.

1. Z Kliniki Pediatricznej; kierownik: doc. dr W. Klepacki i z Zakladu
Chemii Fizjologicznej A. M. w Lublinie; kierownik: prof. dr J. Opienska-
Blauth. Adres. Lublin, ul. 22 Lipca 82 m. 6.

(LIPOCHONDRODYSTROPHY, urine in
amino acids (Pol))

(HYPERTELORISM, urine in
amino acids (Pol))

(AMINO ACIDS, in urine
in hypertelorism & lipochondrodytrophy (Pol))

LIEBHART, Stanislaw; KRYSTOSIK, Jerzy

Desulfur therapy of inflammatory diseases in gynecology and
obstetrics. Polski tygod. lek. 16 no.6:214-217 6 F '61.

I. Z I Kliniki Polesnictwa i Chorob Kobietych Wydziału Lekarskiego
A.M. w Lublinie; kierownik: prof. dr med. Stanislaw Liebhart.

(SULFONAMIDES ther) (GYNECOLOGY ther)

KRYSTOSIK, Jerzy

Biochemical problems of protein metabolism in pregnant women.
Pol. tyg. lek. 19 no.28 1116-1119 13-20 Jl'64

1. Z I Kliniki Poloznictwa i Chorob Kobiecych Akademii Medycznej w Lublinie; kierownik: prof. dr. med. S. Liehnart.

MYSAKOWSKA, Helena; KLEPACKI, Miroslaw; GRODZKI, Stanislaw;
KRYSOSIK, Wanda

Comparison of 2 groups of patients with pulmonary tuberculosis
in the Lublin rural area with delayed and neglected treatment.
(Based on the material of the tuberculosis Clinic of Academy
of Medicine in Lublin in 1959-1961 and 1962-1963). Gruzlica
33 no.7:593-595 Jl '65.

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H. Mysakowska).

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with regard to the practical utilization in dyeing wool. p. 107.

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November 1959.

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Handling of materials in the heavy piece production. Podn org
18 no.8:353-355 Ag '64.

1. Research Institute of Machine Technology and Economy, Prague.

KRYSTUFERK, P.

Some problems regarding the development of contactors. p. 241.
Standpoint of the Union of Mechanical and Electrical Engineers and Technicians of Yugoslavia relative to the professional education of the mechanical and engineering cadres. II. p. 259.
Electric power production of Slovenia. p. 261.

Periodical: ELEKTROTEHNISKI VESTNIK.

Vol. 26, no. 7/8, 1958.

TECHNOLOGY

SO: Monthly List of East European Accessions (EEAI) LC

Vol. 8, No. 4
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"/The influence of trace elements on the catalytic activity of
 γ -FeOOH? Alton Krause and Krystyna Lasiewicz (Univ.
Pozna \acute{n} , Poland). Kernstahl Chem. 12, 102-110 (1958) (German
summary).—The small catalytic activity of γ -FeOOH
(I) (contg. 18% H₂O) on the decompr. of H₂O₂ can be con-
siderably increased by traces of Mn⁺⁺ or Mg⁺⁺ adsorbed
on the surface of I, whereas Cu⁺⁺ and Co⁺⁺ did not show
any promoter action in this reaction but in the Indigo car-
mine decoloration. The action is due to formation of metal-
lic ferrites, which, because of their radical structure, may
initiate a chain reaction. A. Kreglewski.

CC
1

HOROWSKA, Hanna; WIELIWOLSKA, Hanna; SROCHINSKA, Janina; SKOCZYLAS, Maria;
KOŁOMIĘCZYK, Krystyna; LESKI, Echian; MAŁCZYKOWA, Małgorzata;
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mikrobiol. 16 no.2:93-100 '64.

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(PUBLIC HEALTH, education,
courses for pub. health organizers (Cx))

KRYSZAKI, C.
TECHNOLOGY

PERIODICAL: GOSPODARKA WODNA, Vol. 18, no. 11, Nov. 1956.

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KRYSZAN, Czeslaw, mgr ins.

Main trends of technical progress in the water management
of agriculture and industry. Gosp wodna 23 no.5:188-190
Maj '63.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1

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The microscope objective with flat field. Pomiar 8 no.1:33 Ja
'62.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1

KRYSZCZYNSKI, T., mgr. ins.

A meniscus-mirror lens for infrared. Pomiary 8 no.5:251
My '62.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

27
A rapid method of determination of phosphorus in dry weight. Leokadia Krzyzak and Stefan Kralikowski (Univ. Lódz, Poland). *Zeszyty Nauk. Univ. Lódz Ser. II Nauki Mat.-Przyrod.* No. 3, 105-13 (1957) (English and Russian summaries).—P was detd. photocolorimetrically by the method of Pike and Subbarow (C.A. 20, 1002), as modified by Karpiaik (*Postępy Biochem.* 1, 50 (1953)) in keratin (I), casein, lecithin, β -nucleoprotein from ox pancreas, tris(*p*-nitrobenzyl) phosphate, and phenyl- β -bromobenzylphosphinic acid (II). Samples (5-40 mg.) were either melted with 6 parts by wt. of $\text{Na}_2\text{CO}_3 + \text{KNO}_3$ 4:1.6 mixt. or dissolved in 3 ml. concd. $\text{HNO}_3 + 0.3$ ml. concd. H_2SO_4 . Results agreed within 0.2-1.8% except for I and II, for which the melted samples gave higher results by 9.5 and 11.8%, resp.
J. Stecki

J.S.

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H.M. w Jastrzebiu. Zdroju Dyrektor: dr W.Kruszewska-Gassowska.
Jastrzebie-Zdroj, Zaklad Leczniczo-Wychowawczy dla dzieci po
chorobie H.M.

(POLIOMYELITIS, in infant and child
sequels, surg. preop. care)

(PREOPERATIVE CARE, in various diseases
polio. sequels surg. in inf. & child.)

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(SALIVA, physiology,
secretion, measurement, registration & demonstration,
technic)

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Acta physiol. polon. 8 no.3:405 1957.

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(ERYTHROCYTES,
count, eff. of hypoxic-hypercapnic hypothermia in rats (Pol))
(HYPOTHERMIA, effects,
hypoxic-hypercapnic, on erythrocyte count in rats (Pol))

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Progress in the construction technology of high-pressure engines.
Przegl mech 22 no.11:335-337 10 Je '63.

KRYSEWSKI, Jozef, inz.

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CIA-RDP86-00513R000826910013-1

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Design and construction of the first engine of the 6R3AD76 H.
Cegielski-Sulzer type. Biul techn Cegielski 5:122-133 Special
Issue '61.

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KRYSZEWSKI, M.

"Statistical interpretation of polymeric compounds." Wiadomosci Chemiczne,
Wroclaw, Vol 8, No 6, June 1954, p. 268.

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"APPROVED FOR RELEASE: 04/03/2001

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APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

KRYZEWICKI, MARIAN

POLAND/Chemistry of High Molecular Substances.

I

Abs Jour: Referat. Zhurnal Khimiya, No 10, 1958, 34959,

Author : Marian Kryszewski.

Inst : Not given.

Title : Photopolymerization of Vinyl Bromide. II. Photopolymerization of Vinyl Bromide Dissolved in Cyclohexane under Influence of Continuous Irradiation with Ultraviolet Light.

Orig Pub: Roczn. chem., 1957, 31, No 1, 147-164.

Abstract: The photopolymerization (3130 Å) of vinyl bromide (I) was studied dilatometrically. The molecular weight of polymers was determined viscosimetrically in α -methylnaphthalene solution. The photopolymerization rate of I is proportional to the monomer concentration and to the square root of the intensity of the incident

Card : 1/2

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POLAND/Chemistry of High Molecular Substances.

I

Abs Jour: Referat. Zburnal Khimiya, No 10, 1958, 34959.

Author : Marian Kryszewski.

light. The length of a kinetic chain was determined basically by the rupture at a collision of polymer radicals; no postirradiation polymerization was observed. The efficiency of photoinitiation is close to I. C_g / C_r^2 at 20° is 0.054 (C_g and C_r are the constants of growth and rupture of chains). See part I in RZhKhim, 1956, 13103.

Card : 2/2

"APPROVED FOR RELEASE: 04/03/2001

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APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

POLAND/Chemistry of the High Molecular Compounds.

i.

Abs Jour : Ref Zhur - Khimiya, No 24, 1958, 83968

Author : Kryszcowski, M.

Inst :

Title : The Photopolymerization of Vinyl Bromide. III. Kinetics of the Photopolymerization of Vinyl Bromide, Dissolved in Cyclohexane, Under the Influence of Intermittent Illumination by UV-Light.

Orig Pub : Roczn. chem., 1957, 31, No 3, 893-913.

Abstract : The kinetics of the photopolymerization of vinyl bromide in a solution of cyclohexane under the influence of an intermittent illumination by UV-light at 20 and 50°C. was studied. Determined are: constants of reaction rates of propagation 1.9×10^6 exp. (3300·RT), termination of the propagation by combination of radicals 5.3×10^5 exp. (3800/RT), termination on a monomer 4.2×10^5 exp.

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- 88 -

POLAND/Chemistry of High Molecular Compounds.

I.

Abs Jour : Rof Zhur - Khimiya, No 24, 1958, 83968

(8200/RT). The rate of initiation was determined by the
inhibiting action of p-quinone.
For part II, see R. Zh. Khim., 1958, 34959.

Card 2/2

NAME & BOOK INFORMATION	SCN/983
International symposium on macromolecular chemistry. Moscow, 1960.	
Macromolecular symposium no. 1 conference. Section II. International Symposium on Macromolecular Chemistry. Held in Moscow, June 18-20, 1960. Paper and Summary. Section II. (Moscow, Izd-vo Akad. Nauk SSSR, 1960) 559 p. 5,500 copies printed.	
Supernumerary Agency. The International Union of Pure and Applied Chemistry. Conference on Macromolecular Chemistry?	
See: Sci. & T.A. Preparation.	22
PURPOSE: This book is intended for chemists interested in polymerisation reactions and the synthesis of high-molecular compounds.	
CONTENTS: This is Section II of a multi-volume work containing papers on various molecular chemistry; the papers in this volume treat mainly the kinetics of various polymerisation reactions facilitated by different catalysts or induced by radiation. Among the research topics discussed are electron paramagnetic resonance spectroscopy and light-scattering interpretation. There are extensive reviews in English, French and Russian. No bibliographies are mentioned. References follow each article.	
Authors: V. V. Danilov and I. A. Shchukina (eds.). <u>Industries of Polymers by Synthetic Compounds</u> .	22
Authors: V. V. Danilov and M. A. Zhdan (eds.). <u>Electrolytes of the Industrial Polymerization of Styrene by Free Radicals</u> .	22
Authors: G. A. Lutin, V. I. Tsvetkov, V. I. Litvinov, and I. S. Filatova. <u>Industries of Some Polymerisations and Processes</u> .	22
Authors: A. J. and D. J. Flory (eds.). <u>On the Relative Activity of the Initiators in Polymerisation and Co-polymerisation Reactions of the Other Vinyl Compounds</u> .	22
Editor: I. A. and S. I. Frolikh (eds.). <u>Internal Exchange Reactions in the Process of Radical Polymerisation</u> .	72
Authors: Yu. I. El'kin, D. Iordach, and I. P. Li (Russia). <u>Kinetic Study of Radical Polymerisation of Vinyl Acetate in the Presence of AlCl₃-Al(C₂H₅)₂-H₂O Initiator at a High Degree of Conversion</u> .	123
Authors: Yu. I. El'kin and N. P. Kharlamova (Russia). <u>Study of the Mechanism of Radical Polymerisation</u> .	129
Authors: Yu. I. El'kin and M. I. Nekrasova (Russia). <u>The Polymerisation Rate for a Single-Phase Particulate Radical Polymerisation</u> .	129
Authors: Yu. I. El'kin and Yu. S. Slobodchikov (Russia). <u>Radical Polymerisation of Chloroprene</u> .	135
Authors: Yu. I. El'kin and G. M. Gulyants (Russia). <u>Change of Potential during Polymerisation in Oxidation-Reduction Systems</u> .	139
Authors: Yu. I. El'kin and A. M. Sharapov (Russia). <u>On the Mechanism of Polymerisation of Styrene as a Function of the Nature of the Initiator and Catalyst</u> .	147
Authors: Yu. I. El'kin, A. M. Sharapov, and B. I. Kostyuk (Russia). <u>Polymerisation in the Presence of Organic Compounds of Alkali Metals</u> .	148
Authors: Yu. I. El'kin, A. M. Sharapov, V. A. Kostyuk (Russia). <u>On the Kinetics and Mechanism of the Polymerisation of Vinyl Acrylate by Sodium, Na, K, Li, Rb, Cs, LiClO₄, LiClO₂, and LiCl (Cationic Latex)</u> .	150
Authors: Yu. I. El'kin, A. M. Sharapov, and Yu. S. Slobodchikov (Russia). <u>On the Formation of Stable Complexes at Active Centers</u> .	154
Authors: Yu. I. El'kin and I. A. Shchukina (Russia). <u>Electrolytes of the Polymerisation of Phenylacrylic Acid</u> .	155
Authors: Yu. I. El'kin. <u>On the Mechanism of Ionic Polymerisation</u> .	222
Authors: Yu. I. El'kin and A. M. Sharapov (Russia). <u>On the Rate of Copolymer Compounds in the Cationic Polymerisation of Isobutylene</u> .	224

45

S/081/62/000/021/069/069
B160/B186

AUTHOR: Kryszewski, Marian

TITLE: Remarks on the dependence of viscosity on the concentration
of polymer solutions

PERIODICAL: Referativnyy zhurnal: Khimiya, no. 21, 1962, 524
abstract 21R15 (Roczn. chem., v. 35, no. 5, 1961, 1419-1428
[Eng.; summaries in Pol. and Russ.])

TEXT: A critical examination is made of Thomas's equation (see RZhKhim.,
1961, 8R9) which has been suggested for determining $[\eta]$ from one
measurement of the viscosity at a finite concentration; this equation is
 $\eta = \eta_0 \exp [\eta]_0 c$ (the notations have the usual significance). At low
values of c , expansion into a series produces an ordinary Huggins equation
with $k' = 0.5$. Numerous examples are used to show that Thomas's equation
is satisfied only in a very limited series of molecular weights,
concentrations and compositions of solvent; hence it can be in no way
recommended for high-speed determinations of $[\eta]$. Other formulas for

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Remarks on the dependence of ...

S/081/62/000/021/069/069
B160/B186

quickly determining viscosity are discussed in this connection, preference being given to the ordinary Huggins formulae with tabulated values of k' or the Schultz-Blaschke formula. 34 references. [Abstracter's note:
Complete translation.]



Card 2/2

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25627

P/047/61/012/003/002/003

D247/D302

AUTHORS: Kryszewski, M. and Skorko, M.

TITLE: Basic problems of high polymer physics

PERIODICAL: Postępy fizyki, v. 12, no. 3, 1961, 303-331

TEXT: The authors summarize the basic theory of physics of polymer solutions and the methods of their investigation. Physical properties of a polymer can be expressed as a function of two dimensions: $\sqrt{h^2}$ - the average length (h = distance between the ends of a chain) and $\sqrt{R_o^2}$ - the radius of gyration. Assuming a macromolecule model with a constant valency bond length a and an angle θ between the two consecutive bonds the formula $h^2 = Za^2$ where Z = number of bonds in the chain, can be deduced. This can also be obtained from the analysis of probability of the macromolecule structure using projectiles. The review of the statistics of structure of high isomers includes many references to T.M. Birshteyn and O.B. Ptitsyn (Ref. 21: Fiz. Khim., 26, 1215, (1952)) and O.B. Ptitsyn and Y. A. Sharonov (Ref. 22: Zh. Tekh. Fiz., 27, 2744, 2762 (1957)) who applied the method

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D247/D302

Basic problems of high polymer physics

of rotational isomerism for obtaining the value \bar{h}^2 for isotactic and syndiotactic chains. A. Peterlin (Ref. 25: Coll. Czechosl. Chem. Comm., 22, 84 (1957)) assumed that solutions of finite concentrations can be treated as real gases. His theory was applied in interpreting results from the light dispersion and viscometer methods for measuring macromolecules' dimensions. Methods for determining molecular weight (mol. wt) of a high polymer include: 1) The osmosis method, based on Van't Hoff's law. Recently semipermeable membranes were prepared from polyvinyl alcohol and polychloro-tri-fluoroethylene (Kel-F). Y.Y. Zhukov and A.V. Lebedev (Ref. 49: Koll. Zhur., 10, 423 (1948)) used the dynamical method for measuring the osmotic pressure (o.p.): the initial level of the liquid in the capillary is arranged to be somewhat below the expected equilibrium level and the speed at which the meniscus falls is calculated from readings taken at 1 minute intervals for 10 to 20 mins. The experiment is then repeated starting with the liquid level below the equilibrium position. Both speed-time curves have a common asymptote which determines the equilibrium level in the capillary. Most accurate results are obtained for polymers with mol. wt. from 40,000 - 500,000.

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2) The dispersion method. Two cases are considered: when the dispersing particles are << than the wavelength of the falling light λ ; and when dissolved particles are not small with respect to λ . Zimm's theory of dispersion is given. 3) Sedimentation method. The mol. wt. can be determined in two ways by using an ultracentrifuge; Svedberg's formula is applied. 4) The viscometer method. The basic relation between the viscosity of the solution and the mol. wt. is given by $[\eta] = k M_v^a$, where $[\eta]$ = coefficient of viscosity, M_v = real viscosity, M_v = the average viscometric mol. wt. k and a = constants depending on the high polymer - solvent system. This method does not give the real value for mol. wt. as k and a have to be determined by using another method, e.g. the osmosis method. There are 6 figures and 62 references: 13 Soviet-bloc and 49 non-Soviet-bloc. The references to the four most recent English-language publications read as follows: E. Mason, M. Kreevoy, J. Amer. Chem. Soc., 77, 5818 (1955); 4851 (1957); L. Pauling, Proc. Nat. Acad. Sci., 44, 221 (1958); M.W. Wolkenstern, J. Polym. Sci., 29, 441 (1958); C. Loucheux, G. Weill, H. Benoit, J. Chem. Phys., 55, 540 (1958). X

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Basic problems of high polymer physics P/047/61/012/003/002/003
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ASSOCIATION: Katedra fizyki wydziału chemicznego politechniki
Łódzkiej (Łódź Polytechnic, Chemistry Section,
Department of Physics)

Card 4/4

KRYSZEWSKI, Marian

Remarks on the dependence of viscosity on the concentration of polymer
solutions. Rocznik chemii 35 no. 5: 1419-1428 '61.

1. Department of Physics, Chemical Faculty, Technical University,
Lodz.

KRYSZEWSKI, M.

The International Symposium of Macromolecular compounds in Montreal,
Canada. Polimery 7 no.4:120-122 Ap '62

1. Katedra Fizyki, Wydzial Chemiczny, Politechnika, Lodz.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1

KRYSZEWSKI,M.

The 12th International Congress of Pure and Applied Chemistry.
Polimery tworz wielk 7 no.5:168-171 My '62.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R000826910013-1"

P/014/63/042/001/001/004
D204/D307

AUTHOR: Kryziewski, Marian

TITLE: Some problems connected with the rheology of polymer solutions

PERIODICAL: Przemysl Chemiczny, v. 42, no. 1, 1963, 5-10

TEXT: The present work is a review, based wholly on Western work over the period 1930-1959, and aimed ultimately at the possibility of the analysis of properties of macromolecular substances from the knowledge of their molecular parameters. The differences and similarities between emulsions and polymer solutions are summarized, showing that elastic energy accumulates in polymer solutions as a result of deformation. A semi-mathematical discussion is presented of (a) slow and uniform deformation, (b) slow deformation proceeding at a non-uniform rate of setting, and (c) deformation occurring during more rapid setting, assuming in all cases a fine solid or liquid dispersed phase in a continuous medium. It is indicated how measurements of the quantity of stored energy and of the stress

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D204/D307

Some problems connected with ...

relaxation periods may lead to the determination of a number of molecular parameters of the dissolved polymer. Rheological considerations may also indicate changes in the structure of concentrated polymer solutions, particularly when the polymeric chains may assume spiral or randomly twisted configurations. There are 7 figures, 1 table and 32 non-Soviet-bloc references.

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